

In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method of determining patient compliance in taking a medication, comprising

providing to a patient a combination of a medication and an ~~odorous~~<sup>usa</sup> marker detectable in gaseous exhaled breath, the combination to be taken by the patient as a result of the patient's own actions,

obtaining a sample of the patient's gaseous exhaled breath; and

analyzing the sample of the patient's breath utilizing an instrument adapted to detect said marker detectable in gaseous exhaled breath to ascertain the presence or absence of said odorous marker in the patient's breath, where the presence of the ~~odorous~~-marker is an indication of patient compliance in taking the medication and the absence of the marker is an indication of patient non-compliance in taking the medication; wherein the medication is to be taken by volitional patient action at specified times; and,

based on the analysis, determining whether the patient was compliant in taking the medication.

2. (Currently Amended) The method of claim 1 wherein the medication itself comprises said ~~detectable~~-marker.

3. (Canceled)

4. (Previously Presented) The method of claim 1 wherein the sample of the patient's breath is analyzed to ascertain the presence or absence of said marker by sensor technology selected from the group consisting of semiconductor gas sensor technology and conductive polymer gas sensor technology.

5. (Currently Amended) The method of claim 4 wherein if the marker is present in the sample of the patient's breath, ~~wherein the sensor technology is capable of producing~~produces a unique electronic fingerprint to characterize the marker, and ~~wherein the unique electronic fingerprint~~which is an indication of the presence of the ~~odorous~~-marker in the patient's breath.

6. (Previously Presented) The method of claim 1 wherein the marker is selected from trans-Anethole (1-methoxy-4-propenyl benzene) - anise; Benzaldehyde (benzoic aldehyde) - bitter almond; Butyl isobutyrate (n-butyl 2, methyl propanoate) - pineapple; Cinnamaldehyde (3-phenylpropenal) - cinnamon; Citral (2-trans-3, 7-dimethyl-2, 6-octadiene-1-al) - citrus; Menthol (1-methyl-4-isopropylcyclohexane-3-ol) - menthol; and alpha-Pinene (2, 6, 6-trimethylbicyclo-(3,1,1)-2-heptene) - pine.

7. (Previously Presented) The method of claim 1 wherein the sample of the patient's breath is analyzed to ascertain the presence or absence of said marker by a spectrophotometer.

8. (Currently Amended) The method of claim 1 wherein the sample of the patient's breath is analyzed to ascertain the presence ~~of~~or absence of said marker by a mass spectrometer.

9. (Original) The method of claim 1 wherein the marker is an additive combined with the medication.

10. (Previously Presented) The method of claim 1 wherein the marker is provided with the medication in the form of a coating on the medication.

11. (Original) The method of claim 10 wherein a substance to stimulate salivation is included with the marker.

12. (Original) The method of claim 1 wherein the marker is included with a liquid medication.

13. (Original) The method of claim 1 wherein the marker is included with a pulmonary delivered medication.

14. (Original) The method of claim 1 wherein the marker is included with an intranasal delivered medication.

15. (Original) The method of claim 1 wherein the marker is included with intravenously delivered medication.

16. (Previously Presented) The method of claim 1 further comprising the step of recording results regarding the presence or absence of the marker as provided from the analysis of the sample of the patient's breath.

17. (Previously Presented) The method of claim 16, further comprising the step of transmitting the results from the analysis of the sample of the patient's breath to an individual interested in the results.

18. (Previously Presented) The method of claim 1 where the analysis of the sample of the patient's breath includes comparing any marker sensed in the sample of the patient's breath with a predetermined signature profile of a specific marker.

19. (Original) The method of claim 18 wherein the predetermined signature profile of a specific marker is associated with a specific drug.

20. (Original) The method of claim 18 wherein the predetermined signature profile of a specific marker is associated with a class of drugs.

21. (Original) The method of claim 1 further comprising the step of capturing the sample of

the patient's breath in a vessel prior to analysis.

22. (Original) The method of claim 1 further comprising the step of dehumidifying the sample of the patient's breath prior to analysis.

23. (Currently Amended) The method of claim 1 wherein ~~if the medication and detectable marker are taken by the patient by volitional action, and wherein the odorous marker, is one that is capable of first reacting with enzymes in the patient's mouth to be detectable in order to be detectable, must first react with enzymes in the patient's mouth.~~

24. (Currently Amended) The method of claim 1 wherein ~~if the medication and detectable marker are taken by the patient by volitional action, and wherein the odorous marker, is one that is capable of first reacting in order to be detectable, must first react with acids in the patient's stomach to be detectable.~~

25. (Currently Amended) The method of claim 1 wherein ~~if the medication and detectable marker are taken by the patient by volitional action, and wherein the odorous marker is one that is capable of being, in order to be detectable, must first be absorbed in the patient's gastrointestinal tract and then be, at least partially, excreted in from the lungs.~~

26. (Currently Amended) The method of claim 1, further comprising ~~the steps of: if it is determined that the patient was compliant in taking the medication, analyzing the sample of the patient's breath to ascertain the concentration of said odorous marker in the patient's breath, where the marker concentration correlates with medication concentration.~~

27. (Currently Amended) The method of claim 1 further comprising ~~the step of identifying a baseline marker spectrum for the patient at a time prior to a time at which it is desired to ascertain whether a patient has been compliant in the patient's taking of thea medication.~~

28. (Canceled)

29. (Currently Amended) A method of producing medication which is detectable as an indication of patient compliance in taking the medication comprising the steps of:

identifying an ~~odorous~~-marker substance detectable in gaseous exhaled breath, and combining a medication with said ~~odorous~~-detectable marker substance, wherein said medication is to be taken by volitional patient action at specified times whereby subsequent analysis of the patient's breath will confirm the presence or absence of said marker substance and thus indicate whether the patient has complied in taking said medication.

30. (Currently Amended) The method of claim 1 wherein the marker is included with ~~transdermally delivered a~~ medication adapted for transdermal delivery.

31. (New) The method of claim 1 wherein the marker is an additive combined with the medication.

32. (New) The method of claim 1 wherein the marker is a combination of markers combined as an additive with the medication.

33. (New) The method of claim 1 wherein more than one medication is included in the medication.

34. (New) The method of claim 1 wherein the marker is an olfactory marker or an odorous compound.